

Notice of Allowability

Application No.

10/626,144

Examiner

Marc S. Zimmer

Applicant(s)

TERRY, KARL W.

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/29/05.
2. ☒ The allowed claim(s) is/are 1-3,6-8,10-17 and 41-52.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Allowable Subject Matter

Applicant has cancelled all claims subject to rejection over the prior art. Claims 1-3, 6-8, 10-17, and 41-52 are allowable. Claims 1-3 and 6-8 are allowable for the reason that *Terry* states in the broader description only that the quantities of the epoxy-functional silane and disilane corresponding to the multipodal silane of the instant invention are between 1 and 90 wt. percent and 1 and 75 wt. percent respectively. There is no suggestion that the epoxy-functional silane should be present in a smaller molar quantity than is the disilane nor is there any teaching that particularly motivates one of ordinary skill to employ these materials in the specified ratio. Indeed, in the Examples, the epoxy-functional silane is always used in molar excess of the disilane. Claims 10-17 and 41-52 are allowable for the reasons outlined in the last correspondence.

No references more germane than those already cited were discovered in an updated survey of the prior art. One reference of interest was Sasaki et al. WO (U.S. Patent Application Publication No. 2005/0031791 was used as a translation). Sasaki discloses a composition for forming low refractive index films wherein the composition from which the silica precursor, component (A), is derived resembles the composition of claim 1 in many respects. Paragraphs 31-35 describe a silica precursor derived from (i) an alkoxysilane that, in one embodiment, may be an epoxy-functional silane and/or (ii) an alkoxysilane equivalent to the multipodal silane of the present invention. Either one of these compounds, or both, can be employed in the formation of the precursor and polymerization is performed in the presence of an acid catalyst. Paragraph 93 states

that, in the event that both are used, 5 to 500 parts of the alkoxy silane equivalent to the multipodal silane are used relative to 100 parts of the other alkoxy silane.

In order to arrive at the instant invention, all of the following would have to apply: (i) the practitioner would have to employ organosilicon compounds of both types, (ii) the first alkoxy silane would have to be epoxy-functional, and (iii), the epoxy silane would have to be used in an amount corresponding to 0.3:1 to 0.7:1 moles relative to the number of moles of the multipodal silane. There is nothing motivating the skilled artisan to select this combination of parameters from the literally thousands of embodiments contemplated by Sasaki's broader disclosure. The only Example that even teaches the preparation of silica precursor from a combination of multipodal silane and alkoxy silane, Example 24, uses methyltrimethoxy silane as the alkoxy silane and, further, the alkoxy silane is used in molar excess of the multipodal silane. In view of all of these considerations, the instant invention is deemed unobvious over the teachings of Sasaki.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 29, 2005

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